Changkat Changi Secondary School
Physics Department
Upper Secondary

Name: _____( ) Class: _____ Date: _____

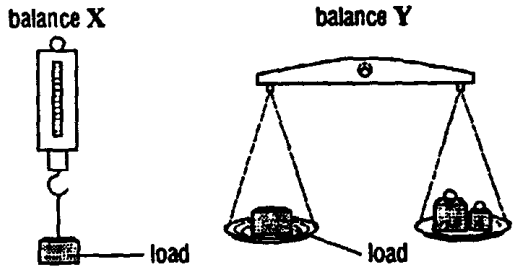
TOPIC 4 : Mass, Weight & Density (Chapter 4)

WORKSHEET 4.1 & 4.2

12

(A) MULTIPLE-CHOICE QUESTIONS (5 marks)

1. A load is placed on balance X and then on balance Y.

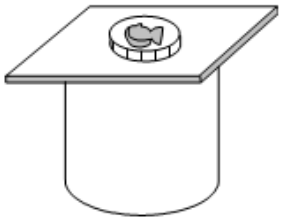


What is measured by each balance? (1 mark)

	balance X	***balance Y***
A	mass	density
B	mass	weight
C	weight	density
D	weight	mass

( )

2. A coin is placed on a card on top of a beaker, as shown. If the card is puled away quickly, the coin does not move sideways but falls into the beaker.



Which property of the coin makes this possible?

A density **B** inertia **C** volume **D** thickness ( )

3. Which statement correctly describes the weight of an object ?

A The amount of space taken up by the object.
B The amount of substance the object contains.
C The resistance to changes in motion.
D The pull of gravity on the object. ( )

4. The gravitational field strength on the surface of the Moon is 1.6 N/kg.
Which values of mass and weight apply to an object placed on the Moon's surface?

	mass/kg	weight/N
A	10	0
B	10	1.6
C	10	16
D	16	10

( )

5. A satellite is launched from Earth into orbit.
What happens to the mass and weight of the satellite? (1 marks)

	mass	weight
A	decreases	stays constant
B	stays constant	decreases
C	stays constant	increases
D	increases	decreases

( )

(B) STRUCTURED QUESTIONS (7 marks)

6. State three differences between mass and weight. (3 marks)

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_____

_____

_____

_____

7. The value of the gravitational field strength *g* is 10 N/kg on Earth and 1.5 N/kg on the Moon. An astronaut, who has a mass of 90 kg on the Earth, goes to the Moon. Show by calculations or otherwise, how you determine :

(a) his weight on the Earth, (2 marks)

(b) his mass on the Moon, (1 mark)

(c) his weight on the Moon? (1 mark)